REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 17 and 18 are pending in this application. Claims 17 and 18 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent Application Publication 2005/0153725 to Naghian et al. (herein "Naghian") in view of U.S. patent 7,027,432 to Carolan et al. (herein "Carolan"), U.S. Patent Application Publication 2003/0065749 to Gailey et al. (herein "Gailey"), and U.S. Patent Application Publication 2002/0126642 to Shitama. That rejection is traversed as now discussed.

Each of independent claims 17 and 18 is herein amended to clarify features recited therein. In that respect independent claim 17 now recites:

> a terminal information storage unit configured to receive, from the mobile terminal, and store a binding update packet of the mobile terminal including a home address of a unique IP address of the mobile terminal which has a possibility to be a destination of packet transfer from the transfer device and includes at least (1) either a Link Care of Address (LCoA) or (2) the Link Care of Address (LCoA) and a Regional Care of Address (RCoA), the Link Care of Address including a network prefix of the access router, which is used to transfer the packets from the transfer device to the mobile terminal, and a host identity of the IP address assigned to the mobile terminal, the Regional Care of Address including a network prefix of another transfer device managed by the first communications carrier and that is located in the access network or on a boundary of the access network and a host identity of the IP address assigned to the mobile terminal;
>
> a binding information storage unit to (1) record binding information between the home address and LCoA of the mobile terminal, when the binding update packet includes the home address and LCoA of the mobile terminal, and (2) record binding information between the LCoA and RCoA of the mobile terminal, when the binding packet includes the LCoA and RCoA of the mobile terminal[.]

Similarly, independent claim 18 now recites:

> receiving, from the mobile terminal, and storing in a storage unit a binding update packet of the mobile terminal

> including a home address of a unique IP address of the mobile terminal which has a possibility to be a destination of packet transfer from the transfer device and includes at least either a Link Care of Address (LCoA) or a Regional Care of Address (RCoA), the Link Care of Address including a network prefix of the access router, which is used to transfer the packets from the transfer device to the mobile terminal, and a host identity of the IP address assigned to the mobile terminal, the Regional Care of Address including a network prefix of another transfer device managed by the first communications carrier and that is located in the access network or on a boundary of the access network and a host identity of the IP address assigned to the mobile terminal;
>
> a binding information storage unit to (1) record binding information between the home address and LCoA of the mobile terminal, when the binding update packet includes the home address and LCoA of the mobile terminal, and (2) record binding information between the LCoA and RCoA of the mobile terminal, when the binding packet includes the LCoA and RCoA of the mobile terminal[.]

The above-noted features clarified in the claims are believed to be clear from the original disclosure, see for example page 10, lines 5-20, and page 16, lines 7-25.

The claims are directed to a transfer device and mobile communication method in a mobile communication system in which mobile terminals that join in a mobility management service provided by their own separate communication carriers can use a mobility management service even if the mobile stations use a connection management service provided and are controlled by another communications carrier due to traveling, so that it becomes possible to sufficiently acquire users (subscribers) of the mobility management service.[1]

As recited in the claims, the terminal information includes at least either of a Link Care of Address (LCoA) received from the mobile terminal indicating a network prefix of the access router and a host identity of the IP address assigned to the mobile terminal, or the LCoA and a Regional Care of Address (RCoA) received from the mobile terminal, indicating

[1] Specification for example at page 2, lines 12-20 and page 51, lines 21-34.

a network preface for another transfer device managed by the first communications carrier and a host identity of the IP address assigned to the mobile terminal.

One feature to which the claims are directed, and with reference to Figure 1 in the present specification as a non-limiting example, is to allow a mobile terminal 20 which, for example, is managed by the access network (A) of a first communications carrier to also operate with another access network (B) that is managed by a separate second communications carrier. In that respect the claims as currently written are specifically directed to an environment in which different access networks (A), (B) are managed by different communications carriers. Applicants submit the features of the claimed invention are neither taught nor suggested by either of the applied art to Naghian nor Carolan.

According to the claims as written, a binding update packet of a mobile terminal including a home address of a unique IP address of the mobile terminal is stored. The claims further clarify the terminal information further includes at least the link care of address (LCoA) or both the link care of address (LCoA) and the regional care of address (RCoA). The claims further clarify both the link care of address (LCoA) and the regional care of address (RCoA) include a host identity of the IP address assigned to the mobile terminal and further recites features of a binding information storage unit or operation. The features clarified in the claims are believed to clearly distinguish over the applied art.

The outstanding rejection relies on Carolan to disclose a transfer device as the router 130 in Figure 1 including a terminal information storage unit,[2] and the outstanding Office Action further newly cites Shitama to disclose utilizing either a link care of address (LCoA) or a regional care of address (RCoA), particularly citing Shitama at paragraph [0197].[3]

[2] Office Action of November 30, 2009, bottom of page 3.
[3] Office Action of November 30, 2009, top of page 5.

In reply to those grounds for the rejection, applicants submit neither Carolan nor Naghian disclose or suggest the features now clarified in the claims with respect to the terminal information storage unit, and applicants submit none of the applied art disclose or suggest the now clarified "binding information storage unit" or operation.

As clarified in the claims, the terminal information can include either a link care of address (LCoA) or both the link care of address (LCoA) and a regional care of address (RCoA). Applicants submit that feature is neither taught nor suggested by the applied art.

The newly applied art to Shitama for example at cited paragraph [0197] merely discloses a virtual network-prefix address can be stored as a care of address. Shitama in further detail discloses for example in paragraph [0194] that a virtual network prefix contained in a received router advertisement can be combined with an interface ID of a mobile node to create a virtual-network-prefix-based IPv6 address. Those disclosures in Shitama, however, do not correspond to the features clarified in the claims in which a terminal information can include either a link care of address (LCoA) or both the link care of address (LCoA) and a regional care of address (RCoA). Further, such disclosures in Shitama do not correspond to the clarified claimed features in which a binding information storage unit can record binding information between the home address and the link care of address (LCoA) of the mobile terminal, when the binding packet includes the home address and the link care of address (LCoA) of the mobile terminal, or further can record binding information between the link care of address (LCoA) and the regional care of address (RCoA) of the mobile terminal, when the binding packet includes both the link care of address (LCoA) and the regional care of address (RCoA) of the mobile terminal.

Moreover, applicants note Shitama discloses applying a combination of an interface ID and a virtual network prefix as a care of address (CoA) of a mobile node.

In contrast to that operation in Shitama, according to independent claims 17 and 18 the link care of address (LCoA) includes a network prefix of an access router, and a regional care of address (RCoA) includes a network prefix of a transfer device. Thereby, Shitama is directed to a different technical feature than as in claims 17 and 18.

Moreover, according to independent claims 17 and 18 since in the link care of address (LCoA) or regional care of address (RCoA) stored in an information storage unit of a transfer device managed by a first communications carrier includes a network prefix of an access network in which a mobile terminal is located, and is managed by a second communications carrier, it becomes possible to transfer packets to a mobile terminal connected to an access router managed by the second communications carrier without needing a transfer device managed by the second communications carrier.

Shitama does not disclose or suggest and cannot realize such an operation. In contrast to such features possible in the claimed invention, in Shitama the network prefix does not change if a mobile node moves between different subnets in the same domain. In such further ways claims 17 and 18 further distinguish over Shitama.

In view of the foregoing comments applicants respectfully submit each of amended independent claims 17 and 18 as currently written positively recites features neither taught nor suggested by the applied art, and thus claims 17 and 18 are believed to be allowable over the applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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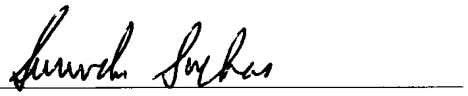

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